



IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Valeri V. GOLOVLEV et al.
Application No.: 10/776,882
Filing Date: 02-11-2004
Confirmation No. 3388
Title: METHOD OF VISUALIZATION AND QUANTIFICATION OF
BIOPOLYMER MOLECULES IMMOBILIZED ON SOLID SUPPORT
Group Art Unit: 1641

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

It is respectfully requested that the documents listed on the attached Form PTO-1449 be considered by the Patent and Trademark Office in the above-entitled application and made of record therein.

This statement is believed to be in compliance with the provisions of 37 C.F.R. §§ 1.97 and 1.98. Copies of the foreign and other prior art cited references are attached.

By this submission applicant is not admitting the materiality of these references: they are merely submitted to ensure full compliance with 37 C.F.R. § 1.56.

In the event a fee is required for the filing of this Information Disclosure Statement, the Commissioner is hereby authorized to charge any deficiency in the payment of the required fee(s) or credit any overpayment to Deposit Account No. 12-2355. This form is submitted in duplicate.

Respectfully submitted,

LUEDEKA, NEELY & GRAHAM, P.C.

By: — O. L. —
Robert O. Fox
Registration No. 34,165

November 5, 2004
P.O. Box 1871
Knoxville, Tennessee 37901
(865) 546-4305

*** CERTIFICATE OF MAILING ***

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
on November 5, 2004
Date — O. L. —
Robert O. Fox, Reg. No. 34,165



U.S. Patent Application No. 10/776,882
Docket No. 59004.US/6760.1

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete If Known

Application Number	10/776,882
Filing Date	02-11-2004
First Named Inventor	GOLOVLEV et al.
Group Art Unit	1641
Examiner Name	
Attorney Docket No.	59004.US/6760.1

Sheet 1 of 3

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document No.	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines Where Relevant Passages or Relevant Figs. Appear
		6,180,415	Schultz et al.	01-30-2001	
		6,495,324	Mirkin et al.	12-17-2002	
		6,586,193	Yguerabide et al.	07-01-2003	
		6,602,669	Letsinger et al.	08-05-2003	
		6,649,192	Fernandez et al.	11-18-2003	
		6,682,895	Mirkin et al.	01-27-2004	
		6,699,724	West et al.	03-02-2004	
		6,767,635	Bahr et al.	07-27-2004	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office ²	Number ³				
		WO	90/02205	Olson	03-08-1990		
		WO	98/17317	Bayer et al.	04-30-1998		
		WO	99/20789	Yguerabide et al.	04-29-1999		
		WO	99/21934	Mulvanet et al.	05-06-1999		
		WO	99/23258	Weisburg et al.	05-14-1999		
		WO	00/33079	Mirkin et al.	06-08-2000		
		WO	00/25136	Braun et al.	05-04-2000		
		WO	02/046472	Mirkin et al.	06-13-2002		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁴
		BADIEE et al., "Evaluation of Five Different cDNA Labeling Methods for Microarrays Using Spike Controls", BMC Biotechnology, December 11, 2003, 3 23-28 Norway	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		ELGHANIAN et al., "Selective Colorimetric Detection of Polynucleotides Based On Distance-Dependent Optical Properties Of Gold Nanoparticles", Science Vol. 277, August 22, 1997, 1078-1081 Illinois, USA	
		STIMPSON et al., "Real-time Detection of DNA Hybridization and Melting on Oligonucleotide Arrays by Using Optical Waveguides", Proc. Natl. Acad. Sci. Genetics, July 1995, pp. 6379-6383, Vol. 92 USA	
		LI et al, "Multiple Thiol-Anchor Capped DNA-gold Nanoparticle Conjugates", Nucleic Acid Research, 2002, pp. 1558-1562, Vol. 30, No. 7, 2002 Oxford University Press, Illinois, USA	
		PETERSON et al., "The Effect of Surface Probe Density on DNA Hybridization", Nucleic Acid Research, 2001, Vol. 29, No. 24, pp. 5163-5168, Metcalf Center for Science and Engineering, Boston University, Boston, MA USA	
		J. HASSEMAN, "Microarray Technology An Array Of Opportunity", Nature, April 25, 2002, Vol. 416, pp. 885-891	
		CSÁKI et al., "DNA Monolayer on Gold Substrates Characterized by Nanoparticle Labeling and Scanning Force Microscopy", Nucleic Acid Research, 2001 Oxford University Press, Vol. 29, No. 16 e81, Jena, Germany	
		RAMAKRISHNAN et al., "An Assessment Of Motorola Code Link Microarray Performance For Gene Expression Profiling Applications", Nucleic Acid Research, 2202, Vol. 30, No. 7 e30, 2002 Oxford University Press, Illinois, USA	
		FRITZSCHE et al., "Nanoparticle-Based Optical Detection of Molecular Interactions for DNA-Chip Technology", Institute for Physical High Technology, Biomedical Nanotechnology Architecture and Application, Proceedings of SPIE 2002, Vol. 4626, pp. 17-22, Jena, Germany	
		FLAVELL et al., "A Microarray-Based High Throughput Molecule Marker Genotyping Method: The Tagged Microarray Marker (TAM) Approach", Nucleic Acid Research, 2003, Vol. 31, Nov. 19 e115, France	
		WINSSINGER et al., "Profiling Protein Function With Small Molecule Microarrays", PNAS (Peptide Nucleic Acid), August 20, 2002, Vol. 99, No. 17, pp. 1139-1144, USA	
		SOUTHERN et al., "Molecular Interactions on Microarrays", Nature Genetics Supplement, Vol. 21, January 1999, pp. 5-9, Dept. of Biochemistry, University of Oxford, UK	
		DUGGAN et al., "Expression Profiling Using cDNA Microarrays", Nature Genetics Supplement, January 1999, Vol. 21, pp 10-14, Cancer Genetics Branch, National Human Genome Research Institute, Maryland, USA	
		CHEUNG et al., "Making and Reading Microarrays", Nature Genetics Supplement, Vol. 21, January 1999, pp. 15-19, Dept. of Pediatrics, University of Pennsylvania, USA	
		LIPSHUTZ et al., "High Density Synthetic Oligonucleotide Arrays", Nature Genetics Supplement, Vol. 21, January 1999, pp. 20-24, Affymetrix, Inc., Santa Clara, California USA	
		TATON et al., "Scanometric DNA Array Detection with Nanoparticle Probes", Science, September 8, 2000, Vol. 289, pp. 1757-1760, Department of Chemistry, Center for Nanofabrication and Molecular Self-Assembly, Northwestern University, Evanston, Illinois USA	
		CHANDRASEKHARAN et al. "Assembling Gold Nanoparticles as Nanostructured Film Using an Electrophoretic Approach", NanoLetters, 2001, Vol. 1, No. 2, pp. 67-70, Published December 13, 2000, Notre Dame Radiation Laboratory, Notre Dame, Indiana USA	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁴
		KIM et al., "Gold Nanoparticle-Based Sensing of "Spectroscopically Silent" Heavy Metal Ions, Nano Letters, April 2001, Vol. 1, No. 4, pp.165-167, Published March 9, 2001, Department of Chemistry, Materials Research Center and Center for Nanofabrication and Molecular Self-Assembly, Northwestern University, Evanston, Illinois USA	
		ADACHI, "Conguative Transition of Gold Nanoparticle Spheroids Into Monolithic Colloids: Structure, Lifetime, and Transition Model:, Langmuir 2001:17 3863-3870, Published on Web May 18, 2001, 2001 American Chemical Society, L'Oreal Isukuba Center, Japan	
		FLEMING et al., "Stability and Exchange Studies of Alkanethiol Monolayers on Gold-Nanoparticle-Coated Silica Microspheres", Langmuir 2001:17 4836-4843, Published on Web July 13, 2001, 2001 American Chemical Society, The Max Tishler Laboratory for Organic Chemistry, Tufts University, Medford, Massachusetts USA	
		BUINING et al., "Preparation of Functional Silane-Stabilized Gold Colloids in the Sub-Nanometer Size Range", Langmuir 1997:13 3921-3926, 1997, American Chemical Society, Dept. of Molecular Cell Biology, University of Utrecht, The Netherlands	
		HUANG et al., "Electric Manipulation of Bioparticles and Macromolecules on Microfabricated Electrodes", Analytical Chemistry 2001, Vol. 73, No. 7, pp 1549-1559, Nanogen, Inc., San Diego, California USA	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹Unique citation designation number. ²Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ³For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴Applicant is to place a check mark here if English language translation is attached.

\\Lng1\pink\59004\59004.US.temp.2004.11.05.ids in draft.wpd